BC Stats
FACT SHEET

Municipal Solid Waste 2010 - 2025

Commissioned by the BC Ministry of Environment

Municipal Solid Waste Projection

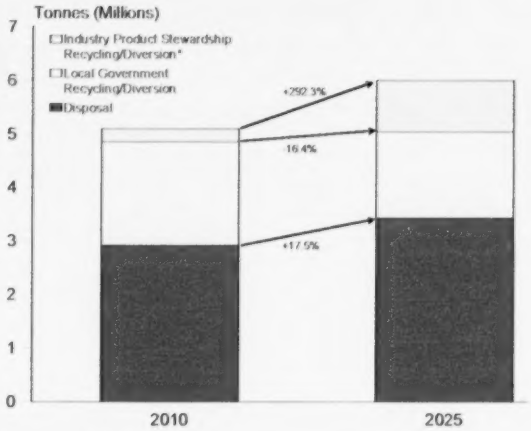
Forecasting future waste quantities is an integral element of planning for waste management programs. In 2010, an estimated 5,088,818 tonnes of municipal solid waste were generated in BC. Of this waste, 2,911,510 tonnes of were disposed and approximately 1,934,910 tonnes of material were diverted by local governments. A further 242,398 tonnes were collected for management through industry stewardship programs.[1] This amounts to a provincial diversion rate of 43%.

Expanded recycling and other waste diversion programs are being planned with the aim of reducing municipal solid waste disposed in BC. Given population and economic growth, the quantity of waste generated may exceed the planned growth in recycling and diversion activities such that municipal solid waste disposed could continue to grow. Three diversion scenarios have been developed by BC Stats to assist with planning to meet future waste management and recycling needs.

Scenario 1

"Current and planned diversion and recycling programs continue as planned, but enhanced construction and demolition waste programs do not materialise as quickly as expected"

If current recycling/diversion rates are maintained, it is estimated that disposal tonnage in BC will reach 3.4 million tonnes (+17.5%) by 2025. The amount of materials recycled/diverted by local government is forecast to decline 16.4% to 1.6 million tonnes due a predicted surge in industry product stewardship recycling/diversion (+292.3% to just under one million tonnes). This assumes maintenance of stewardship rates for current programs plus the addition of new programs already identified for implementation.

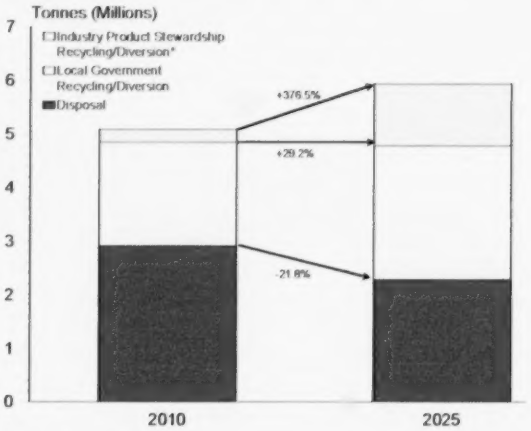


Source: BC Stats, 2012

Scenario 2

"Current and planned diversion and recycling programs increase collection rates, construction and demolition waste programs are implemented and organic material diversion programs expand significantly"

Should current recycling/diversion rates climb moderately, waste disposal is projected to decline from 2.9 million tonnes to 2.3 million tonnes (-21.8% from 2010) in 2025, while local government recycling/diversion could jump 29.2% to 2.5 million tonnes. Greater diversion of organics would be one of the main drivers of this increase. At the same time, industry product stewardship diversion could climb 376.5% to 1.2 million tonnes. This assumes the addition of a stewardship program for construction, renovation and demolition (CRD) waste and moderately stronger growth in collection from newer programs.



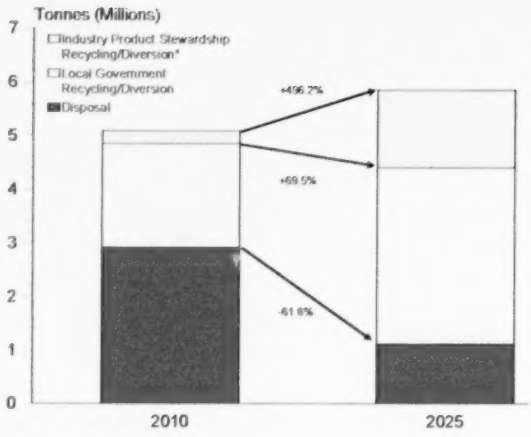
Source: BC Stats, 2012

[1] Local government recycling/diversion programs include material recycling, organics composting and other waste diversion programs operated by local governments. Industry product stewardship recycling/diversion programs are offered by producers of products regulated under the BC Recycling Regulation.

Scenario 3

"Current and planned diversion and recycling programs significantly increase collection rates, high performing construction demolition waste programs are implemented and organic material diversion programs expand dramatically"

If recycling/diversion rates increase dramatically, it is predicted that a 69.5% boost (to 3.3 million tonnes) in local government recycling/diversion and a 496.2% jump (to 1.4 million tonnes) in industry product stewardship recycling/diversion would cause the volume of waste disposed of in landfills to shrink by nearly two thirds (-61.6%) to 1.1 million tonnes by 2025. As with scenario 2, diversion of organics would be the main driver in the increase in local government recycling/diversion. The stewardship growth assumes the addition of a CRD stewardship program, plus much higher collection rates for the newer stewardship programs.



Source: BC Stats, 2012

Background to the projections

British Columbia is planning to implement new product stewardship programs over the coming years, most notably for packaging and printed paper in 2014. This new program will involve large quantities of packaging and paper materials and is therefore a significant factor in the growth of the stewardship portion of the forecasts.

For the industry product stewardship projections, population growth from the PEOPLE 36 population model ("Population Extrapolation for Organizational Planning with Less Error") was applied to current collection rates with an adjustment to accommodate the shift of a substantial portion of packaging and printed material from local government recycling programs to industry product stewardship. For the *Moderate* and *Aggressive* diversion scenarios, most of the decline in disposal will be driven by enhanced collection performance for existing and new programs, and new programs to collect and manage organics and construction and demolition materials. More detail on the methodology used to project waste disposal and diversion is available in the full report, entitled Solid Waste Generation in British Columbia 2010-2025 Forecast.

Data Limitations

There are several limitations to both existing waste management data as well as the data projected for the purposes of this report.[2] Readers are strongly advised to use caution with any of the estimated values provided, and rounding is recommended as the data is not as precise as it may appear. Some of the most notable impediments to producing reliable provincial data for waste management as a whole include the following:

- Differences in the methods and frequency of data gathering.
- Diversity of Regional Districts including population density, industrial capacity and geographical topography and difficulty making assumptions for regions that lack waste management data. Of the regions that do have relatively recent data for municipal solid waste, few have a breakdown by sector and fewer still have sectoral splits for rates of diversion.
- Waste generation, disposal and recycling data provided in Statistics Canada's Waste Management Industry Survey is often inconsistent with locally-produced data.
- The differences in the terminology that the various sources use can create many operational difficulties when surveys are in the field, as well as when results are being compared.
- Each sector is affected differently by some of the methodological difficulties present in the data sources.

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[2] For a more detailed outline of data limitations, see the BC Stats/Ministry of Environment report by Jade Norton: "British Columbia's Solid Waste Flow, 2006" (February, 2010) and the Natural Resource Canada report by Robert Sinclair: "An Analysis of Resource Recovery Opportunities in Canada and the Projection of Greenhouse Gas Emission Implications" (March, 2006).

Table 1 - Scenario One

('000s Tonnes)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Disposal	2912	2944	2996	3042	3092	3135	3180	3218	3244	3264	3289	3312	3338	3367	3395	3422
Residential	1275	1289	1305	1322	1340	1359	1378	1397	1416	1435	1454	1473	1491	1510	1528	1545
ICI	1142	1159	1180	1199	1221	1238	1257	1272	1282	1289	1298	1305	1313	1323	1333	1343
CR&D	495	496	511	521	531	537	545	549	546	540	537	534	533	535	535	534
Local Gov't Recycling/ Diversion	1935	1955	1991	2024	1776	1513	1533	1546	1554	1556	1563	1571	1580	1593	1606	1618
Residential	771	779	794	807	707	602	610	616	618	619	622	625	629	634	639	644
ICI	993	1003	1022	1038	886	726	736	742	745	746	749	752	756	762	767	773
CR&D	171	173	176	179	182	184	187	189	190	191	193	194	195	197	199	201
Industry Product Stewardship	242	245	248	252	539	835	847	858	870	882	894	905	917	928	940	951
Total Generated	5089	5144	5235	5317	5406	5482	5560	5623	5667	5702	5746	5788	5835	5888	5940	5991
Diversion Rate	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%

Table 2 - Scenario Two

('000s Tonnes)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Disposal	2912	2869	2827	2784	2742	2700	2657	2615	2573	2530	2488	2446	2403	2361	2318	2276
Residential	1275	1256	1237	1218	1199	1180	1161	1142	1122	1103	1084	1065	1046	1027	1008	989
ICI	1142	1127	1111	1096	1081	1066	1051	1035	1020	1005	990	974	959	944	929	913
CR&D	495	486	478	470	462	454	446	438	430	422	414	406	398	390	382	374
Local Gov't Recycling/ Diversion	1935	2028	2156	2273	2115	1880	1929	1902	1976	2039	2112	2183	2259	2340	2421	2501
Residential	771	811	860	907	844	751	770	786	826	865	905	945	985	1026	1067	1108
ICI	993	1035	1088	1136	1021	861	873	875	902	924	950	974	1001	1030	1060	1090
CR&D	171	182	209	229	250	268	286	241	247	250	257	264	273	283	293	302
Industry Product Stewardship	242	246	253	260	549	903	974	1047	1060	1074	1088	1101	1115	1129	1142	1155
Total Generated	5089	5144	5235	5317	5406	5482	5560	5623	5667	5702	5746	5788	5835	5888	5940	5991
Diversion Rate	43%	44%	46%	48%	49%	51%	52%	53%	55%	56%	57%	58%	59%	60%	61%	62%

Table 3 - Scenario Three

('000s Tonnes)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Disposal	2912	2792	2672	2553	2433	2314	2194	2075	1955	1836	1716	1597	1477	1357	1238	1118
Residential	1275	1220	1165	1110	1054	999	944	889	834	779	724	669	614	558	503	448
ICI	1142	1096	1051	1005	959	914	868	822	776	731	685	639	594	548	502	457
CR&D	495	476	457	438	420	401	382	363	345	326	307	288	270	251	232	214
Local Gov't Recycling/ Diversion	1935	2105	2310	2503	2422	2206	2331	2144	2233	2373	2520	2666	2816	2971	3126	3280
Residential	771	847	931	1014	988	904	959	944	992	1066	1141	1216	1291	1367	1443	1518
ICI	993	1065	1148	1227	1141	981	1022	973	996	1048	1103	1156	1212	1270	1328	1387
CR&D	171	193	230	261	293	321	350	227	244	259	276	294	313	334	355	374
Industry Product Stewardship	242	246	253	261	551	962	1035	1257	1332	1347	1364	1380	1396	1413	1429	1445
Total Generated	5089	5144	5235	5317	5406	5482	5560	5623	5667	5702	5746	5788	5835	5888	5940	5991
Diversion Rate	43%	46%	49%	52%	55%	58%	61%	63%	66%	68%	70%	72%	75%	77%	79%	81%

Source: BC Stats, 2012